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ABSTRACT

This study evaluated the Five P's (Parent/Professional Preschool Performance Profile) observational scale through which preschool teachers and parents evaluate the behavior of disabled or nondisabled children in natural settings while the children interact with familiar adults over prolonged periods of time. Developmental skills and interfering behaviors are the two main categories observed and rated. In this replication study 370 children ranging in age from 20 months to 7 years from a wide range of geographical areas were assessed for teacher/parent rating agreement, Cronbach Alpha reliability, test retest reliability, and the development of a set of experimental norms for the five major subscales. Involved teachers and parents rated the scales positively and the replication study presented strong supportive evidence that these ratings met professional standards of reliability for teachers. (PB)

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THE FIVE P's REPLICATION STUDY

by

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THE FIVE P's REPLICATION STUDY

Abstract

In the broadest sense, The Five P's by Judith S. Bloch evolved from a model of family-agency interaction which has been in development at Variety Pre-Schooler's Workshop (VPSW) since it began in 1966. This national replication study emerged from previous work completed at the school (prior to 1986) which focused on parent and teacher ratings of young handicapped children with learning, language and behavior problems. Ratings were independently completed by the parent at home and the teacher at school during a common assessment period.

This study included 370 children ranging in age from 20 months to 7 years and families from a wide range of geographical areas, a school from Florida, two schools from Indiana, one school from Illinois, three schools from California, one school from Maine, and one school from the New York City area. The schools ranged from private agencies, Head Start centers, public school programs, and hospital affiliated programs. The demographic information collected on families reflects a wide variation with respect to the income level, marital status, and the educational level of both the mothers and fathers. The sample included Black and Hispanic children, and produced data that indicated that English was not the dominant language in all households. The children occupied different ordinal positions in the family.

The 370 children in the study came from classes with a total of 63 different teachers. Of those 63 teachers, 18 held a graduate degree, 30 held a Bachelor's degree, and an additional 15 held a two-year Associate's degree. The teachers held a variety of teacher certifications, and typically had less than 6 years of teaching experience. Many of the teachers had experience working with both handicapped and "normal" children. For the majority of teachers and parents, their participation in the study was the first time they had ever seen or used The Five P's.

Several statistical studies were embedded in this replication project. These were designed to replicate prior studies which had been done within the school at VPSW. A comparison of the ratings between a child's teacher and parent was done. A total of 290 parents had rated

their children, out of the 370 children in the study. The teacher-parent correlations ranged from +.73 to +.82 which is a significantly strong degree of agreement between parent and teacher ratings. The degree of agreement did not vary with the sex or age of the child, but was significantly better in the spring than it was in the fall.

A second statistical analysis was done which focused on the typical Cronbach's Alpha reliability of the scales. Cronbach Alphas were calculated for both teacher and parent ratings for each of the five major domains. Alphas for the teachers' ratings ranged from +.921 to +.959 for samples of approximately 370 children. Alphas for the parents on the five major scales ranged from +.911 to +.956 for samples of approximately 290 children. These results support the rationale for parent data.

A third set of statistical analyses focused on test retest reliability. One hundred thirty-seven (137) children were randomly chosen as a test retest sample from the 370 children in the study. Of those 137 children, 92 parents agreed to and completed the retest work after a three week time delay. Teacher test retest correlation coefficients for the five major domains ranged from +.919 to +.940. These results suggest a professional level of "reliability" for use with individual planning for children, for the ratings of teachers on The Five P's. Parents test retest results ranged from +.845 to +.914. The results suggest that parent ratings fall in the range of "screening" use. That is, they are strong enough to be used for screening children, but should be followed up with further testing.

A final statistical analysis focused on developing a set of "experimental" norms for the five major scales for both teachers and parents. For this analysis we used the 370 children from the study and added an additional 184 children from the Spring 1988 testing at VPSW, for a total of 554 children. Norm tables were calculated for 3, 4 and 5 year old children, since the norm sample allowed at least 100 children in each of those categories for teachers and parents, except for parents of 5 year old children (N was approximately 90 in that group). Those

norm tables are found in the Appendices, and should be understood as initial or experimental norms.

Teachers and parents were asked to evaluate the usefulness of The Five P's. Approximately 82% of the parents who responded, rated the scales as useful, with the Social Development Scales as the most useful. Parents indicated that The Five P's helped them understand early childhood development patterns, helped them set goals for their children, and better understand what the teacher was doing in the classroom. Approximately 80% of the teachers who responded rated the scales positively. Teachers also rated the Social Development Scales as the most useful. They stated that The Five P's helped them work with parents, set goals for the child in their classroom, and less importantly, understand the early childhood development patterns. Negative comments from both the parents and the teachers focused on the number of items in the scales (458) and the time it took to complete the process.

In general, the replication study presented very strong supportive evidence that the ratings of these children meet professional standards of reliability for teachers. The quality of parent ratings was very close to the quality of the teachers. The evidence also supports the central idea that the use of The Five P's facilitates the interaction between the family unit and the school. Clearly, The Five P's helps parents and teachers understand the child better, helps both plan appropriate activities, prepare the IEP, and facilitates collaboration between the child's two major child care systems.

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Southeast

- THE RALPH J. BAUDHUIN ORAL SCHOOL, Fort Lauderdale, Florida: School Administrator: Joan C. Billows

Midwest

- NORTHWEST INDIANA SPECIAL EDUCATION COOPERATIVE, Crown Point, Indiana: School Administrator and Project Liason: Gwenn Sciackitano
- LAFAYETTE SCHOOL (School City of Hammond), Hammond Indiana: School Administrator: James Sands, Project Liason: Dusty Rhodes

Midwest (cont'd)

- CRETE ELEMENTARY SCHOOL, North Elizabeth-Crete, Illinois: School Administrator: William Hoecker; Project Liason: Jean Wildermuth

West Coast

- SPEECH & LANGUAGE DEVELOPMENT CENTER, Buena Park, California: School Administrator and Project Liason: Kathy Kutschka
- AZTECA HEAD START, Los Angeles, California: Director: Fred Hermosillo; Project Liasons: Theresa Raya and Jane Sepulveda
- ABC CHILD DEVELOPMENT, Motebello, California; Project Liason: Marian Mitchell

Northeast

- VARIETY PRE-SCHOOLER'S WORKSHOP, Syosset, New York: Assistant Directors: Sunny Holmes and Judith Margolis
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Section 1 - Introduction to The Five P's Replication Study

Introduction to The Five P's

Work on The Five P's which stands for Parent/Professional Preschool Performance Profile, was initiated in the early 1970's at Variety Pre-Schooler's Workshop (VPSW)*. The Five P's by Judith Simon Bloch began as a result of the school's experience with preschool children with language, learning and behavior problems in special education classes. The scale was an effort to systematically prepare a comprehensive summary that detailed the current functioning of children diagnosed as either emotionally disturbed or psychotic, retarded, autistic or language impaired. These children were often considered untestable by standard psychological procedures.

Since very young, atypical children are often uncooperative with unfamiliar adults in unfamiliar settings; not motivated to try; do not have the required attention span to sit, or the language skills to respond, standardized tests alone may be of limited use in diagnosis. As Bronfenbrenner ruefully remarks, "much of American developmental psychology is the science of the behavior of children in strange situations with strange adults" (Chess & Thomas, 1982). Special education teachers often have received and relied on information about these children that was incongruent with their observations in the classroom. The dissatisfaction in special education with current diagnostic procedures was at least matched by similar frustration from the parents. For all these reasons, as well as others another approach was developed which includes observations from the child's primary settings (home and school) by the adults most familiar with the child's performance.

The Five P's assesses the behaviors of children. It builds upon Bronfenbrenner's (1979) rationale that the best way to understand

*Formerly known as Pre-Schooler's Workshop, and established in Garden City, New York in 1966.

the development of children is to observe their behavior in natural settings while they are interacting with familiar adults over prolonged periods of time. He points out that "the most serious problem with the range of outcome measures is what is omitted: information about the child's behavior in the situations of everyday life -- at home, in the day care center, and on the playground. The unknowns include the activities in which he becomes involved with other children, parents, and other adults," (Bronfenbrenner, 1979). This ecological approach incorporated in The Five P's is also compatible with the NAEYC Position Statement on Standardized Testing (Young Children, 1988), which identifies a "utility criterion." It states that "the purpose of testing must be to improve services to children." It supports the VPSW model of evaluation which includes data obtained from observations of performance at home and in school by the two primary caregivers: parents and teachers. "For test results to be valid, tests are best administered to children individually in familiar, comfortable circumstances by adults whom the child has come to know and trust." (Young Children, 1988).

The Five P's is an observational scale. Parents use their "best parental judgment" and teachers use their "best educator's judgment" when rating the child's performance on the observable behaviors and skills listed in the scales. This is comparable to "good clinical judgment": a concept well-established and heavily relied upon to produce evaluations and plans for remediation. That is, parents and teachers are for the most part objective observers. Teachers have been prepared and trained to become professional observers. With experience they become more skillful in observation, evaluation and planning. In our clinical practice we have noted that parents are naturally and intuitively reliable observers when a structured instrument is utilized. With experience in rating their child their judgments improve. The process also promotes increased

parental involvement in the child's educational program.

Unique to this Five P's approach are the raters and the assessment setting. Both the child's parents' and teacher's judgments are included in the interdisciplinary team evaluation. Both rate the child separately but simultaneously on behaviors that are observed in the child's two primary natural settings: the home and classroom. Items are listed in behavioral terms, which objectifies and operationalizes the reported information.

Our staff and parents found The Five P's useful because it helped them:

... collect and organize their material

... identify a child's needs and strengths

... prepare a data base for the child's program of remediation

... measure change at 6 month intervals

... structure parent education and involvement

The scales on The Five P's are divided into two sections: (1) Developmental Skills and (2) Interfering Behaviors. All of the items reflect behaviors that are observable in a child's activities at home and at school. The scales list documented markers that tap critical developmental skills. Most are the traditional and familiar competencies that have been norm-referenced as developmental milestones in the professional literature (Cohen & Gross, 1979; Urgiris & Hunt, 1975, Balla & Cicchetti, 1984). Other items in the scales have been included because our experience suggests these to be useful skills for the repertoire of the developing child. The Interfering Behaviors are items that are thought to hinder a child's learning. They are characteristic of atypical children and may be considered deviant; inappropriate, regressed, or primitive behaviors. Carol Lidz (1983) described such problematic behaviors that interfere with learning as any of the following: "emotional expression of a younger child; extremes or excesses of behavior

which in of themselves may not be unusual; displays of behavior at unusual times which may be appropriate in other contexts, but not in the classroom; behaviors which would be considered unusual in any context." Judgments about performance in the child's two most familiar settings produces a comprehensive profile of the child's functioning. As an ongoing assessment tool it integrates the efforts of teacher, clinical staff and parents; and initiates the home/school link and a collaborative effort.

The Rating System

The rating system developed for The Five P's sometimes seems to those familiar with criterion referenced tests to be subjective, but it is indeed reliable. Teachers and parents independently complete their ratings on the scales during a specific observational period in the fall and spring (a six-month interval) carefully watching the child at work and at play, noting behaviors. Ratings are based on the child's performance (what the child is doing), not on the child's assumed capability (what one believes the child is able to do, but may not be doing). Developmental Skills and Interfering Behaviors are rated by the criteria listed below:

Y = Yes	(always/usually true)
S = Sometimes	(sometimes true)
N = No	(never/rarely true)

Y (Yes): a skill/behavior the child always/usually demonstrates. This rating is used when the skill/behavior is consistently observed or is part of the child's repertoire. When the Y rating is applied to an Interfering Behavior it means that the behavior always or usually interferes with learning.

S (Sometimes): a skill the child sometimes demonstrates. This rating is used when the behavior/skill is occasionally but not consistently observed; is not automatic; or may be emerging. For example, a child may perform a task with one material in a particular setting with a specific adult. If any of these variables are changed,

the child is unable to complete the task. This skill would receive an S rating. When the S rating is applied to an Interfering Behavior, it means the behavior sometimes interferes with learning.

N (No): a skill the child never or rarely demonstrates. This rating should be used when the behavior/skill is not observed; occurs by chance; or is not part of the child's repertoire. When the N rating is applied to an Interfering Behavior, it means that the behavior does not interfere with learning.

Early History

For those in preschool special education the need to include parents in their child's program and the need for an assessment instrument appropriate for use with young children were two major practice issues. From the beginning the issue for our staff was not whether to work with the parents, but rather, how best to initiate and maintain this essential collaboration. The Five P's is an instrument and an approach that is responsive to these concerns. Informal versions of our assessment scale were developed in the early 70's. The social work staff was responsible for preparing and including parents in evaluation. Later,parents were trained more systematically to rate the behavior of their own children. Thus, a formal structure to ensure good parental participation in evaluation was established.

Work in the late 1970's established the clinical usefulness of this approach which trained teachers and parents to observe and rate a child's behavior in their natural setting across the six major areas of development (classroom adjustment, self help, motor, social, language and cognitive). Approximately 85% of parents with a child in the school participated and concurred that this method of shared assessment produced a useful profile of the child's performance, helped them participate in preparation of the IEP, and gave them a better understanding of the child development and the school plan of remediation.

Reports about The Five P's were given at local and national conferences in the early 1970's. Publication began in the late

70's when The Five P's was entered into the professional literature. (Impaired children: Helping families through the critical period of first identification by Judith S. Bloch. Children Today (1978) Washington, D.C.: Office of Child Development, Children's Bureau, U.S. Dept. of Health, Education and Welfare No. 79-300 14).

Historical Overview of the Statistical Analyses (1981-86)

The first of a series of statistical studies on The Five P's were planned with John S. Hicks, Ed.D. Associate Professor for Special Education at Fordham University, in 1982. It was clear that it was critical to establish the statistical nature of the ratings of the teachers and the parents. Were the ratings of the teachers and parents valid and reliable enough to be used for program planning and the development of the Individualized Education Program? In psychometric language, were the teacher's judgments valid and reliable? Obviously, the same concerns had to be raised in regard to parent ratings. It was necessary to demonstrate that identical results would be obtained when ratings were prepared by different testers and with many different kinds of children. From 1981-1986 VPSW carried out a set of studies which have attempted to answer those questions.

Validity Evidence

One of the most important types of validity for the scales in The Five P's is considered the "content" validity. The content for the scales was developed by the director, Judith Bloch, along with other professional staff with extensive clinical experience working with young children with special needs. Staff produced items relevant to the functioning of children in their classrooms and their homes: items that identified competencies and "special needs" or deficits. Those items were put together with developmental markers from the literature on the growth and development of children. They produced two sections for each scale: Development Skills and

Interfering Behaviors for each major domain.

A concurrent validity study was done in 1983. Scores from teachers on the several scales of The Five P's were compared with scores from external tests, administered by "outside" evaluators or other clinical staff members (psychologists, speech pathologists) at VPSW. These results were presented at the 1983 summer meeting of the American Psychological Association. The validity coefficients were found to be within the acceptable range.

A second concurrent validation study was run in the 1984-85 school year, since at that time many of the items on the original scale had been altered or replaced. This later study included validation information from both the teachers and the parents, as compared with external ratings from other staff members at the agency.

Reliability Studies

The reliability studies which have been conducted at VPSW have focused on two types of reliability: Test Retest and Inter-Rater reliability. It was critical that teachers who use the scales demonstrate a high-retest reliability. Retests took place within 2-3 weeks. The comparison used for the inter-rater reliability was between the teacher and the assistant teacher, even though it is recognized that there are significant differences in their training, experience and classroom responsibility. Nevertheless, since these two staff members have the most similar and frequent classroom contact with the child, and interact with the child in the same primary natural setting, a comparison of their results was considered useful.

The first reliability study was done in the Spring of 1982. The results indicated that most of the items in the Developmental Skills sections were moderately reliable. Problem results seemed to be related to both substance and language; some items themselves were of dubious value, but the major finding indicated that many items were not clearly stated. As a result, a complete item analysis study

was conducted during the 1983-84 school year. This produced revised scales and new items.

A second reliability study, done in the Fall of 1984, produced stronger results. At that point, the Developmental Skills sections of the scales were meeting the professional criterion of +.90 which is suggested in the literature for use with individual children. The reliability data from that study on the Interfering Behaviors suggested that some problems remained, and a further study of the weak scales and problematic items on the Interfering Behaviors was done in 1985.

In the Spring of 1985 a set of realiability analyses using Cronbach's Alpha were run on the scale. The sample used was drawn from the population at VPSW. The results were all above +.90. A replication of those analyses, using the national samples of the 1986-88 Five P's Replication Study has just been completed. The results are reported in this monograph.

A manual by John Hicks, Ed.D. and Judith Bloch, ACSW (1987) that provides the reader with the specific information about the research studies (from 1981-1986) can be obtained from VPSW.

In the Fall of 1985, The Five P's was critiqued in Volume III of Test Critique: Elizabeth Teas-Hester, Ph.D (1985)* said:

> "The Five P's offers a much-needed step toward meaningful assessment of children for whom formal testing is inappropriate. It can allow active collaboration between parent and professional, nonintrusive assessment of the child in familiar settings, and establishment of goals sensitive to the child's strengths and needs.
>
> With rigorous validity and reliability studies based on a more disparate normative sample, this instrument could provide a means for assessing and measuring change in previously 'untestable' children and actively involving parents in the assessment and intervention process with professionals."

*Elizabeth Teas-Hester, Ph.D. Inreal Research Coordinator, Department of Communication Disorders and Speech Science, University of Colorado, Boulder, Colorado.

Additional studies with an expanded national sample began in 1986 sponsored by VPSW and with additional funding from The A.L. Mailman Family Foundation, Inc., The American Legion Child Welfare Foundation, Inc., and The Hugo & Doris Neu Foundation. These studies were initiated with students in schools in the southeast, midwest, northeast, New England and the far western parts of our country. They are evaluated and reported on in this research report.

The research which is reported on in this document describes continued efforts on a national level to demonstrate that The Five P's is a psychometrically sound scale for the observation of exceptional preschool children, The findings indicate that it can be used with confidence by teachers and parents who are involved in the profession of helping preschool exceptional children.

Classification and Diagnosis

Procedures for identifying children with handicaps who are in need of preschool special education were similar across participating states. All served mildly to seriously impaired children. Each state relied upon information from a variety of sources (psychologists, physicians, teachers, speech therapists, interdisciplinary teams and parents) to determine eligibility and placement as well as classification.

The professionals responsible for classification made it clear that there are particularly pointed concerns with diagnostic procedures. Since the passage and enactment of PL 94-142, professionals and parents expressed the worry that the "use of categorical labels for children below six years would be inappropriate" (Mallory & Kerns, 1988). With young children under 5 years of age, there is always a hazard of error or misdiagnosis. While clinical evaluations (by psychologists, neurologists, pediatricians or speech therapists) are necessary and important for establishing the presence of a handicapping condition, they are not always sufficient. Extented observations in

the child's more natural classroom setting are needed to arrive at a more thorough understanding of capability and special need. Many times, the classification given to a young special needs child may not truly reflect the child's strengths and needs.

In the absence of a clear and medically confirmed syndrome, generally speaking, the younger the child the greater the reluctance of the diagnostic team to assign a label with poor prognosis. Clinicians indicated they often chose the more benign diagnosis (when this seemed possible and appropriate) or when there was some uncertainty regarding differential diagnosis. Nationally, 70.5% of the special needs children between 3 and 5 years of age are classified as speech and language impaired. (Mallory & Kerns, 1988). Mallory & Kerns point out "from a sociological perspective, the speech and language label may be viewed by both professionals and parents as less stigmatizing than more discrete categories such as mental retardation... Because the labeling process occurs early in a child's educational career... the speech and language impaired label is perceived to be easier to swallow and less likely to interfere with the embryonic parent-professional relationship." This trend was also found in the population of children involved in The Five P's Replication Study.

Overview of The Five P's Replication Study

The Five P's Replication Study began in September 1986 and concluded in June 1988. A two-day planning session was conducted in September 1986 during which the VPSW research team met with the three regional consultants; one from Florida, California, Illinois and Indiana. At this time, the consultants were introduced to the project, the tasks, the research team, The Five P's materials and assessment process. The consultants attended the second of three evening orientation meetings conducted by Judith Bloch, Executive Director, for new VPSW parents to prepare to participate in assessment. Parents were introduced to The Five P's and trained as

observers and raters of children's behaviors. The consultants had an opportunity on day two of the planning session to discuss what they observed in the previous night's meeting: preparing and training teachers and parents to use The Five P's. The research team was available to the consultants throughout the project to respond to questions and problems about the assessment process; or implementing the project.

At these two-day meetings, a plan for recruiting schools to become participants in the study was formulated. The consultants agreed to contact private and/or public schools who served special needs children functioning between 2 and 5 years of age. VPSW would follow up these contacts with letters explaining the project as well as supplemental materials about the school and The Five P's. Once the school administrator signed the letter of agreement, the consultant met with the contact person at the school to plan training sessions and distribution of materials.

The time of the year when schools used The Five P's and who trained the teachers and parents were factors that varied among schools. During the two year project, three out of nine schools used The Five P's in the fall and six out of nine schools used The Five P's in the spring. Two of these schools also used The Five P's during the fall of the second project year. For five of the schools in this last group, The Five P's was not their primary assessment tool. These teachers had just completed an evaluation when they were asked to do The Five P's.

In the first project year, almost all teachers were first time users. While in the second year, there was a mixture of first and second time users. Four schools who had used The Five P's during year one, also participated year two. Two additional schools joined the project during year two and completed The Five P's in the fall and the spring.

In exchange for complimentary materials and technical assistance each school in the study agreed to provide the following:

- The Five P's completed by teachers and parents on each child who had permission to be in the study.
- Retest of The Five P's by teachers and parents on a randomly selected sample of children from each class.
- Demographic material on children, families and teachers in the study.
- User reaction questionnaires completed by teachers and parents.

Participating Schools

Nine schools representing the regions of the Southeast, West Coast, Midwest, Northeast and New England participated in the study. A brief description of each school and the training procedure for teachers and parents follows.

Southeast. The Ralph J. Baudhuin Oral School of Nova University in Fort Lauderdale, Florida participated in the project during the 1986-1987 and 1987-1988 school years. The Baudhuin School, a component of The Family Center of Nova University, is a private, non-profit school located on the University's campus. Children with learning disabilities; speech and language disorders; a history of underachievement; hearing impairments; and mild developmental delays are serviced. The Early Learning Center of the Baudhuin School (the program involved in the project) provides half-day and full-day programs for special needs children from two to six years old. The curriculum emphasizes cognitive, language, motor and social development and includes art, music and adaptive physical education.

Training. Parents and teachers were trained by the regional consultant, Susan Kabot, M.Ed. Teachers were trained to complete The Five P's Scales, the Graphic Profile and IEP forms. Since the teachers were familiar with other developmental checklists, one training session was felt to be sufficient.

Two parent meetings were set up by Ms. Kabot. Parents were able to attend the one most convenient for them. Those who were unable to attend either meeting were trained individually by Ms. Kabot. The Five P's was introduced and parents were given instructions for completing the instrument. Parents were encouraged to call the consultant during the assessment period if questions arose about The Five P's.

Midwest. Three schools represented this region in the project: (1) Northwest Indiana Special Education Cooperative (referred to as Crown Point) in Crown Point, Indiana; (2) Lafayette School (referred to as Hammond) in Hammond, Indiana; and (3) Crete Elementary School in Crete, Illinois. Crown Point and Crete Elementary were participants in the project during the 1986-87 and 1987-88 school years. Hammond participated in the project during the 1986-87 school year. Deena Schaffert Ph.D. (clinical psychologist in private practice) was the regional consultant. Dr. Schaffert reported that the teachers used The Five P's for the first time in the Spring 1987. The project was introduced to them as they were completing their spring evaluations. Thus, The Five P's was a second spring assessment added to their work load. Brief descriptions of the schools (all public schools) and the procedures for training teachers and parents follow.

Northwest Indiana Special Education Cooperative (Crown Point) is part of the Indiana public school system in Lake County. It is located 12 miles from Gary, Indiana and 35 miles from Chicago, Illinois. The Cooperative serves children from 10 school corporations (districts) which span 500 square miles. Three-fourths of the school

corporations are considered suburban and a quarter are considered rural.

The Lafayette School (Hammond) is a city school. Hammond is considered an industrial town. District special education programs serve mild to severe mentally handicapped children; severely emotionally handicapped children; and communicative, hearing, and physically impaired children.

Crete Elementary School in the Crete-Monee School District is located in northeast Will County in the southern edge of the Chicago metropolitan area. The school borders on the State of Indiana and covers 80 square miles. The district serves 4,502 students ages 3-21. During the past six years, speech and language impaired, physically handicapped and learning disabled children have been serviced in the district programs.

Training. Training sessions for teachers and parents in all three schools were conducted by Dr. Schaffert on site. One training workshop was scheduled for teachers. Parents were asked to attend one of the two sessions scheduled for them (one daytime and/or one evening meeting). (Only one parent session was scheduled for The Lafayette School.) Program supervisors in each of the schools took responsibility for notifying parents about the project and meeting.

The format of the workshops was the same. Dr. Schaffert introduced The Five P's, presenting the rationale behind a parent/teacher assessment, an historical overview and a brief description of the instrument. Parents and teachers participated in a hands-on experience during which they completed one of The Five P 's scales. A question and answer session followed.

During the second year of the project, Ms. Gwenn Sciackitano, Program Supervisor and the teachers at Crown Point introduced the project to parents and trained them. Dr. Schaffert conducted a training seminar for the parents at Crete Elementary School and served as a resource to school staff implementing the project.

West Coast. The Speech and Language Development Center (SLDC), Azteca Head Start, and ABC Child Development represented the West Coast in The Five P's Replication Study. SLDC participated in the project during the 1986-87 and 1987-88 school years. Azteca Head Start and ABC Child Development were in the project during the 1986-87 school year. Elizabeth Teas-Hester, Ph.D. (Department of Psychiatry, UCLA School of Medicine), was the regional consultant. The VPSW research team also worked directly with Ms. Kathy Kutschka, Preschool Director and School Psychologist at SLDC. Brief descriptions of the schools and the training procedures follow.

The Speech and Language Development Center (established in 1955) is a nonpublic, nonprofit school and therapy center accredited by the California State Department of Education. The SLDC, located in Buena Park, California, serves neurologically handicapped children from infancy to 20 years who have learning, language, and/or behavior problems. The preschool program serves children 12 months to 7 years. Most children in the program are multiply handicapped. Children from Orange, Los Angeles, and Riverside Counties are served. Parent involvement through classroom participation, home programs and parental input is an integral part of the school program.

Training. SLDC was using The Five P's assessment process for several years prior to the project. The Five P's was first used at SLDC in 1983. Some of the teacher's were already familiar with The Five P's. Ms. Kutschka conducted workshops during which teachers and parents were trained to use The Five P's.

Azteca Head Start located in Los Angeles, California has a population of 500-600 children, ten percent of whom are classified as developmentally delayed. Twenty classes from 11 centers under the auspices of Azteca Head Start, which serves a large Hispanic population, participated in the project. It was reported by

Dr. Teas-Hester that many families are Mexican and transient. For the most part, the Spanish version of The Five P's was used. Children who had developmental delays were evaluated by either the special education departments of the Los Angeles Unified School District, the Motebello School District, or The Alahambra School District or by the clinical director of The Speech and Language Clinic at The California State University in Los Angeles.

Training. Dr. Teas-Hester trained her contact person, Ms. Jane Sepulveda, at Azteca Head Start to use The Five P's. Ms. Sepulveda was then responsible for training teachers and parents to use The Five P's.

ABC Child Development is located in Motebello, California. Nine classes under the auspices of ABC Child Development participated in the project. Children are referred to ABC Child Development from Children's Hospital, university speech and hearing clinics and regional centers (centers which service handicapped individuals from birth to grave through family support services, legal services, evaluations and referrals, placement and more). Medical doctors and speech pathologists give the children a categorical diagnosis.

Training. Dr. Teas- Hester trained her contact person, Ms. Marion Mitchell, at ABC Child Development. Ms. Mitchell was then responsible for training teachers and parents to use The Five P's.

Northeast. The Preschool Development Program of Schneider Children's Hospital, Long Island Jewish Medical Center (referred to as L.I.J.) represented the northeast region in The Five P's Replication Study. L.I.J. located in New Hyde Park, New York primarily services children from Queens County, New York (a borough of New York City). The program, funded by New York State Family Court Act (Article 236) serves children from 2 to 5 years with language or learning problems, mental retardation, impaired vision or hearing, behavior problems or physical deficits. Children attend one of three half-day sessions.

Bilingual classes are available for the Hispanic population. With this group, The Spanish Five P's were used.

Training. L.I.J. was using The Five P's for four years prior to their participation in the project. But a majority of the teachers during the 1987-88 school year were new and the parents were not familiar with the assessment process. Therefore, formal training sessions were set up. Two members of the VPSW research team, Judith Bloch, ACSW, Executive Director of VPSW and Project Director, and Janice Friedman, M.S., Research Associate, conducted a workshop to train Irene Hassett, Ph.D., Director of Programs, Division of Child Development, at Schneider Children's Hospital; Arlene Uss, Coordinator of The Preschool Development Program; teachers and family case workers to use The Five P's assessment process. The workshop focused on the rationale behind a shared parent/teacher assessment; an historical overview; and observation and rating procedures for implementation in the classroom environment. Ms. Uss was responsible for training parents during evening meetings. Prior to these parent sessions, Ms. Uss attended and observed a parent training session conducted at VPSW.

New England. The Child Development Center at The Waban Project (referred to as The Waban Project) located in Sanford, Maine, a rural community thirty-five miles from Portland, Maine, represents this region in the project during the 1987-88 school year. The Waban Project provides a developmental preschool program in a reverse mainstreamed setting to special needs and non-special needs children ages 2 1/2 to 6 years. Ms. Diana Valvano, Program Director, asked VPSW for assistance in establishing The Five P's as the assessment instrument at the school.

Training. Ms. Valvano was a former teacher at VPSW and was familiar with The Five P's assessment process. Teachers were trained in an inservice workshop by Ms. Valvano. Parents were introduced to

The Five P's through small group workshops. Ms. Valvano trained the parents to observe and rate children's behaviors. Time was set aside during these workshops for parents to use one of The Five P's scales so that questions could be dealt with as they arose.

Section 2. - Demographic Information on the Families and Teachers in The Five P's Replication Study

Part 2 - A. Information on the Families of the Children.

During the life of the project the staff made every effort to collect some relevant demographic information on the families and teachers who participated in the study. This information was voluntary, and in some cases was not made available by the families. This section tries to give the reader an understanding of the kinds of families and teachers who participated in the study. The relevant demographic information on the children in the study is presented in Sections 3, 4, 5, and 6 as each of the different statistical analyses are described.

The information which is given below is provided for three samples. The Test Retest sample includes 137 children and is the basis of the material in Section 5 of this report. The second sample of 370 children was used for the teacher-parent comparison reported in Section 3 and the Cronbach's Alpha sample which is reported in Section 4. This sample of 370 children includes the 137 children of the Test Retest sample plus 233 additional children. The third sample of 554 children was the only sample which included children from Variety Pre-Schooler's Workshop, and was used for the preliminary norm tables which are discussed in Section 6 of this report. This "normative" sample of 554 children includes the 370 children from the nine schools plus 184 children from the Spring of 1988 at Variety Pre-Schooler's Workshop.

Table 2.A.1 presents information on the number of families in each of the three samples in terms of the marital status of the families. It is obvious that the majority of children were in intact families, ranging from about 54% to 66%. Approximately 15% of the children came from families where there was a single parent, parents were separated, or divorced. From 4 to 6% of the families were foster parents, and from 10 to 18% of the cases we did not have any data.

Table 2.A.1 - Marital Status of the Parents in The Five P's Replication Study

	Test Retest Sample of 137	Cronbach Sample of 370	Normative Sample of 554
Intact	91	199	321
Divorced	9	24	33
Single Parent	8	18	26
Widowed Parent	1	2	3
Parents Separated	5	12	21
Blended Family	3	19	32
Foster Parents	5	20	35
Other	2	6	11
No Data Available	13	70	72
Totals	137	370	554

Table 2.A.2 presents the information which was available on the estimate of family income for the three samples. This data was collected in terms of categories. Families were asked to place the income level into one of five categories presented at the left of the table. No effort was made to ask for more precise data, and thus no real average income can be calculated. It would seem that the average level of income is probably in the $20,000 to $34,999 range. There's a wide range of the level of income among families.

Table 2.A.2 - Estimate of Income of Families in The Five P's Replication Study

	Test Retest Sample of 137	Cronbach Sample of 370	Normative Sample of 554
$ 00 to $ 9,999	20	41	53
$ 10,000 to $ 19,999	26	69	94
$ 20,000 to $ 34,999	42	105	169
$ 35,000 to $ 49,999	13	34	71
$ 50,000 Plus	11	26	61
No Data Given	25	95	106
Totals	137	370	554

Tables 2.A.3 and 2.A.4 present the information we have on the educational levels of the fathers and the mothers who participated in the study. It would seem evident from the data in those tables that there was a wide variation of educational background, from parents who had completed only grade school to those who had completed a graduate level degree. Table 2.A.3 gives the data on the fathers' educational background and Table 2.A.4 gives the data for the mothers.

Table 2.A.3 - Educational Level of Fathers in The Five P's Replication Study

	Number of Fathers in Each Category		
	Test Retest Sample of 137	Cronbach Sample of 370	Normative Sample of 554
Grade School	3	13	15
Some High School	9	23	30
High School Graduate	43	100	152
Some College	19	48	69
College Graduate	15	32	80
Some Graduate Study	1	4	7
Graduate Degree	11	29	43
No Data Given	36	121	158
Totals	137	370	554

Table 2.A.4 - Educational Level of Mothers in The Five P's Replication Study

	Number of Mothers in Each Category		
	Test Retest Sample of 137	Cronbach Sample of 370	Normative Sample of 554
Grade School	4	8	12
Some High School	10	28	38
High School Graduate	55	132	206
Some College	23	67	96
College Graduate	18	35	73
Some Graduate Study	-	5	9
Graduate Degree	8	16	28
No Data Given	19	79	92
Totals	137	370	554

Information was collected about the types of occupations which both the father and the mother held. The types of occupation were taken from the Occupational Outlook Handbook (1986) (U.S. Department of Labor 1986). It seems that the jobs represented such a wide variety of occupations that groupings which made sense were hard to determine. Thus, Table 2.A.5 presents the number of different occupations which were found.

Table 2.A.5 - Number of Different Occupations of Fathers and Mothers

	Test Retest Sample of 137	Cronbach Sample of 370	Normative Sample of 554
Fathers	27	39	44
Mothers	14	25	27

Data was collected from the parents about the racial composition of the family. Table 2.A.6 presents the information we have collected about the primary race of the child who was in the study. The data suggests that between 60 and 70% of the children were Caucasian, and about 10 to 13% were Black, and 10 to 13% were Hispanic. Between 10 and 15% were not identified racially. The data suggests that the sample included Black and Hispanic children, although no effort was made with the limited resources of the study to try to approximate a "national demographic" pattern.

Table 2.A.6 - Primary Race of the Children in The Five P's Replication Study

	Number of Children in Each Sample		
	Test Retest Sample of 137	Cronbach Sample of 370	Normative Sample of 554
Caucasian	95	211	348
Black	12	31	58
Oriental	2	5	9
Hispanic	15	47	51
No Data Given	13	76	88
Totals	137	370	554

Table 2.A.7 presents data about the primary language which was spoken in the child's home environment. It was obvious that English was the primary language. However, it should be noted that Spanish and French were also represented in the samples from California and Maine, respectively, as the dominant language in the home. Again no effort was made with the limited resources of the study to approximate a "national demographic" pattern, but it is noted that English was not the dominant language in about 5% of the sample.

Table 2.A.7 - Primary Language of the Home

	Number of Families in The Five P's Replication Study		
	Test Retest Sample of 137	Cronbach Sample of 370	Normative Sample of 554
English is Primary	117	341	418
French	9	11	11
Italian	1	1	2
Spanish	8	14	18
Korean	1	1	1
Hebrew	1	1	2
No Data Given	-	-	102
Totals	137	370	554

One final piece of demographic information was collected, the position of the child in the family unit. That is, was the child the first, second, third, etc. child in the group of children? While not all the families provided that information, Table 2.A.8 did suggest that the position of the child in the family varied in our sample.

Table 2.A.8 - Position of the Children in the Family

	Number of Children at Each Position		
	Test Retest Sample of 137	Cronbach Sample of 370	Normative Sample of 554
First Child in the Family	48 (29)*	118 (65)*	192 (113)*
Second Child in the Family	37	95	155
Third Child in the Family	18	41	68
Fourth Child in the Family	7	15	21
Fifth Child in the Family	3	5	6
Sixth Child in the Family	-	1	1
No Information on Child	24	95	111
Totals	137	370	554

*First and only child in family.

The demographic data on the families of the children who were in this study suggests that the families are different, and that our efforts to reach out to several geographical sections of the country in this study did succeed in providing us with a varied group of families. No effort was made to select families who would be in the study on any criteria. When a school agreed to participate in the study, and a teacher agreed to participate, then all children in the class were included in the study. All of the parents of the children were contacted and permission was obtained from most of the parents of the children. Children whose parents would not agree to their child being in the study were excluded from the study, as per professional standards for informed consent formulated by the American Psychological Association (1982).

Part 2 - B. Demographic Information on the Teachers in The Five P's Replication Study

Information was collected about the teachers who participated in the study. There were a total of sixty-three (63) teachers from

nine (9) different schools who did the ratings on The Five P's. There were an additional nineteen (19) teachers from VPSW who did the ratings on The Five P's during the Fall of 1987. These nineteen teachers were included in the normative samples.

Table 2.B.1 presents the distribution of teachers from the different schools.

Table 2.B.1 - The Number of Teachers at Each School in The Five P's Replication Study

	Regular Sample	Normative Sample
Florida Baudhuin School	7	7
Indiana Crown Point	7	7
Indiana Hammond	1	1
Illinois Crete	3	3
California Speech & Language Development Center	8	8
California Azteca Head Start	14	14
California ABC Child Development	9	9
New York L.I.J. Preschool Development Program	7	7
New York VPSW	0	19
Maine Waban Project	7	7
Totals	63	82

We requested information from the teachers about their professional backgrounds and teaching experiences. Table 2.B.2 which follows presents the information about the teachers' college preparation. Of the 63 teachers in the general part of this study, eighteen (18) held a graduate degree, thirty (30) held a Bachelor's degree and fifteen (15) held a two year Associate of Arts degree.

It can be noted that the teachers from VPSW were from New York State which requires a graduate degree for permanent teacher

certification. Seventeen of the nineteen teachers from VPSW held a graduate degree, which was proportionately higher than the other teachers in the study. It should be remembered that the ratings from those teachers were only included in the part of the study which related to establishing norm tables for the scales.

Table 2.B.2 - Academic Preparation of Teachers in The Five P's Replication Study

Degrees	Regular Sample	Normative Sample
Associate Arts	15	15
Bachelor Arts/Science	30	32
Masters Arts/Science	14	31
Other Graduate	4	4
Totals	63	82

The teachers were asked to identify their areas of certification. The data which we were able to collect is presented in Table 2.B.3. Most importantly, it should be noted that the certifications which were held varied considerably, and only a small number of teachers who participated in the study were fully licensed in the area of special education or in the area of early childhood education.

Table 2.B.3 - Primiary Certification of the Teachers

	Regular Sample	Normative Sample
Special Education	11	24
Early Childhood	2	2
Nursery - 6th Grade	6	9
Other Certification	21	24
No Information	23	23
Totals	63	82

Information was requested concerning the work experience of the teachers in the study. Table 2.B.4 gives the number of teachers in the study who also had experience working with normal children.

Table 2.B.4 - Experience of Teachers in the Study with Normal Children

	Regular Sample	Normative Sample
Teacher of Normal Children	38	42
Assistant Teacher, Normal class	5	6
Student Teaching, Normal class	7	14
Totals	52	62

The teachers were also asked to indicate the length of experience that they held within the program where they were working. Table 2.B.5 gives the data on the length of teaching within the program where they were presently working with handicapped children.

Table 2.B.5 - Years of Experience of Teachers in Present Position

	Regular Sample	Normative Sample
Less Than One Year	8	10
One to Three Years	22	33
Four to Six Years	13	17
Seven to Nine Years	7	9
Ten to Twelve Years	6	6
Thirteen or More Years	3	3
No Information	4	4
Totals	63	82

The teachers were asked to indicate the degree of experience which they had working with non-handicapped or normal children. The teachers indicated the length of experience which they held with

programs which serve normal children. Table 2.B.6 gives the data on the length of experience with normal children respectively.

Table 2.B.6 - Years of Experience of Teachers With Normal Children

	Regular Sample	Normative Sample
Less Than One Year	8	11
One to Three Years	22	28
Four to Six Years	11	13
Seven to Nine Years	4	6
Ten to Twelve Years	4	4
Thirteen or More Years	4	4
No Information	10	16
Totals	63	82

In summary the teachers who participated in this study came from a variety of school programs, including public school preschool programs, private preschool programs, Head Start centers, and hospital related programs for preschool children. The majority of teachers had at least a four year bachelors degree and about 20% also had a graduate degree. Two-thirds of the teachers reported some certification and the majority of the teachers had experience with normal children as well as with handicapped children. Most of the teachers reported less than six years of experience with handicapped children.

Section 3. - Data on Teacher - Parent Comparisons

The first set of research analyses which were specified in the research proposal to The A. L. Mailman Family Foundation on Page 19, stated:

> "1. A correlated analysis of the scores between parent and teacher scores on each of the subscales of The Five P's. We would look for patterns across age groups, comparing the scores of parents and teachers."
> "2. We would complete an analysis of teacher and parent ratings according to subgroups of children with differing 'disabilities'."

As a result of this two year Five P's Replication Study, we had accumulated a total of three hundred seventy (370) separate cases in which a classroom teacher had applied The Five P's to a child in his/her class. In all cases the parents were also asked to complete the ratings on the scale and a total of two hundred and ninety (290) parents completed the scales. At times the parents would not complete all of the scales, but an average of 78.4% of the parents completed the scales in our study.

The total of 370 cases in the sample included 137 children in the Test Retest part of the study. For those 137 children, the first application of the scales was included in this part of the analysis. The Retest data was not included in the 370 cases. The 137 children included in the Test Retest sample represented a random sample of 37.0% of all the cases. Thus, there were an additional 233 children who were rated by parents and teachers. It should be understood that this sample of 370 children represented the natural groups found in the schools, that is when a parent and a teacher agreed to participate in the study, all of the children in a class were included in the study. Of the total sample of 370 children, 234 were boys and 136 were girls.

When parents refused to allow their children to be a part of the study no data was taken from the classroom teacher. At times the

parent agreed to let the teacher rate the child as part of the study, but did not or would not do the parent ratings. The children in this sample were found in seventy-nine (79) different classes, from nine (9) different schools in several parts of the country as indicated in Table 3.1.

Table 3.1 Children in Total Five P's Replication Study Sample, Teacher - Parent Correlations by Schools, Totals, Boys, Girls and # of Classes

School	Total # Children	Boys	Girls	Total # Classes
Maine - Waban Project	26	19	7	4
Florida - Baudhuin School	65	40	25	9
Indiana - Crown Pt.	45	29	16	9
Indiana - Hammond	6	4	2	2
Illinois - Crete	51	37	14	7
California - Speech & Language Development Center	45	28	17	10
California - Azteca Head Start	26	17	9	19
California - ABC Child Development	13	8	5	9
New York - L.I.J. Pre-School Development Program	93	52	41	10
Totals:	370	234	136	79

This sample of 370 children was used in two statistical analyses, the Pearson Product-Moment correlation of teacher and parent scores, plus the calculation of Cronbach's Alpha (Cronbach, 1951). Cronbach's Alpha, while not being specified in the original proposal, had been suggested by one of the other critiques of the scale, using a broader sample than data from Variety Pre-Schooler's Workshop.

Table 3.1 and Table 3.2 present the data on the sample of 370 children, indicating the schools from which they were drawn, boys and girls in the sample, and the percentages of parents who completed the ratings for the five major scales, Self Help, Motor Development, Cognitive Development, Language Development, and Social Development.

Table 3.2 Percentage of Parents Who Applied The Five P's by Scale and Sex of Child

Scale	All Parents Percentage	Boys Percentage	Girls Percentage
Self Help	75.9	75.2	77.2
Motor Development	78.4	78.6	77.9
Cognitive Development	78.1	77.8	78.7
Language Development	74.1	73.5	75.0
Social Development	76.2	76.1	76.5

It was the goal of this project to evaluate The Five P's on a diverse population of children from several parts of the country. No claim is made that the sample which was available was truly "representative" of the preschool populations of all handicapped children, but we do assert that the children in this study represented a diverse set of geographical areas from the children in the Borough of Queens of the City of New York, from a Head Start Center in lower California, from a school for handicapped children in Broward County in Florida, from midwestern communities in Indiana and Illinois, and from a rural community in Maine.

Tables 3.3 and 3.4 give further information about this sample of 370 children which was used to compare teacher and parent ratings. Table 3.3 gives the breakdown of the sample into male and female children. Table 3.4 gives the breakdown of the sample across the four time periods in which the study was conducted, the Fall of 1986,

the Spring of 1987, the Fall of 1987 and the Spring of 1988.

Table 3.3 Distribution of Children in Total Sample By Age and Sex.

Age in Months	Total	Boys	Girls
12 - 23	4	2	2
24 - 35	25	16	9
36 - 47	84	56	28
48 - 59	124	75	49
60 - 71	92	59	33
72 - 83	40	25	15
84 - 89	1	1	0
Totals	370	234	136

Table 3.4 Distribution of Children by Time of Testing and Sex.

Time of Testing	Total	Boys	Girls
Fall of 1986	41	26	15
Spring of 1987	141	91	50
Fall of 1987	164	103	61
Spring of 1988	24	14	10

Attempts were made to identify the major disability of the children in this total sample. This turned out to be fairly difficult, for several very understandable reasons. Often, the child's "official" disability was given with a great deal of hesitation, since in many cases the children were very young and there was a tendency to not apply a "label" at that early an age for fear of being in error, and for fear that the label would stay with the

child for life. Often the label was "generic" as a protection for the child since the child was young and many schools did not want to provide a specific label until a child was older. Since the study went across several states, there were different classification systems which could not be grouped or coordinated. At times it seemed hard to identify a "primary" disability when the child seemed multiply handicapped.

The end result of this set of concerns was the policy of asking for the official "State" category which was used for funding purposes, knowing full well the problems which those official labels might represent. For all of the above reasons a decision was made that an analysis by disability groups was for all intents and purposes of little value. Thus, Table 3.5 presents the official disability categories which were used for "funding". Since we did not have the utmost confidence that the labels were always exact or comparable across the nine schools in the study, Part 2 on page 19 of the research proposal relating to analyses according to disability categories was not attempted.

Table 3.5 Distribution of Children in Sample by Disability Used for Funding Purposes in the Several Schools.

Disability Category	Total	% of Total	Boys	Girls
Autistic	16	4.3	12	4
Emotionally Disturbed	8	2.2	7	1
Learning Disabled	3	.8	2	1
Mentally Retarded	21	5.7	13	8
Hard of Hearing	11	3.0	3	8
Speech Impaired	153	41.5	106	47
Visual Impairment	4	1.1	1	3
Orthopedically Impaired	22	6.0	12	10
Other Health Impaired	9	2.4	4	5
Multiply Handicapped	38	10.3	21	17
Attention Deficit Disorder	4	1.1	4	0
Conduct Behavior Disorder	2	.5	2	0
Pervasive Devel. Disorder	1	.3	1	0
Downs Syndrome	6	1.6	3	3
Developmental Delay	60	16.3	39	21
Emotionionally Disturbed/ Abused	3	.8	1	2
No Data Given	8	2.2	2	0

It can be seen that nearly two-thirds of the children in this study were officially classified in three large general groups, Speech Impaired, Developmental Delay, or Multiply Handicapped. Again, for the purposes of this study it seemed important to note that the sample of 370 children represented a diverse group of handicapped preschool children.

The following procedures were used to study the degree of agreement between the teachers and the parents. The scales of The Five P's includes two parts, a section of Developmental Skills, usually between 20 and 25 and a section of Interfering Behaviors, usually from 8 to 10 in number. By definition the Developmental Skills represent skills which all children should accomplish on a preschool level. Interfering Behaviors are signs of problems in the development of a child, things which "interfere" with normal growth patterns. All items are rated on a three part system, a score of "yes" means that these are consistently a part of the child's behavior or skills, a score of "sometimes" indicates that the behavior is seen at times but not consistently, and a score of "no" indicates that the child cannot do the skill or the behavior has not been observed.

For purposes of the statistical analysis of this report, scores were computed on each of the thirteen sub-scales by assigning two points for a score of "yes", one point for a score of "sometimes", and no points for a score of "no". The points on the Developmental Skills items were then added up, and a second score was made by adding up the score on the Interfering Behaviors. These two sets of scores, one for Developmental Skills and the other for the Interfering Behaviors were then combined for the following statistical analyses.

The thirteen scales of The Five P's are clustered into five major scales, Self Help, Motor Development, Cognitive Development, Language Development, and Social Development. There is

an additional scale, Classroom Adjustment, which is applied only by the teacher and not used by the parents. Self Help includes three sub-scales, Toileting and Hygiene Skills, Mealtime Behaviors, and Dressing Skills. Motor Development includes two sub-scales, Gross Motor/Balance/Coordination Skills and Perceptual/Fine Motor Skills. Cognitive Development is one scale of nearly twice the length of the other sub-scales. Language Development includes three sub-scales, Communicative Competence, Receptive Language, and Expressive Language. Social Development includes three sub-scales of Emerging Self, Relationships to Adults, and Relationships to Children.

Each of the sub-scales is an independent scale, but the intent is that the total scale should be used to achieve as broad a pattern of behavior and performance as is possible. If only parts of The Five P's are used the recommendation would be to use a complete scale, such as Language Development with all of its three component sub-scales to achieve a true picture of a child's language functioning.

For the following analyses the Classroom Adjustment scale was ignored since the parents do not use it and it is impossible to compare teacher and parent ratings on that scale. The analyses which were done used the larger and more stable total scales, that is Self Help, Motor Development, Cognitive Development, Language Development, and Social Development. Scores on each of these larger scales were constructed by adding the scores on the Developmental Skills and the scores on the Interfering Behaviors for all of the sub-scales in each of the five larger scales.

Table 3.6 presents the Pearson Product - Moment Correlation Coefficients achieved by correlating scores from teachers with scores from parents. The tables which are presented below report the findings from the five larger scales. It should be understood from the tables below that the data was analyzed using total scores from the Developmental Skills items plus the total scores

from the Interfering Behaviors.

Table 3.6 Pearson Product-Moment Correlation Coefficients for Teacher - Parent Comparisons for the Five Major Scales

Total Scale	Sample Size and Pearson's Correlation " R's "					
	All		Boys		Girls	
	N	Corr	N	Corr	N	Corr
1. Self Help	273	.821	170	.843	103	.759
2. Motor Development	283	.778	178	.791	105	.761
3. Cognitive Development	283	.755	178	.779	105	.709
4. Language Development	264	.813	165	.826	99	.794
5. Social Development	274	.727	174	.783	100	.604

All Coefficients are Significant at the .001 level.

The above table suggests the following. Most of the correlations are in the +.71 to +.84 range. This is a very significant degree of agreement between the ratings of teachers and the ratings of parents. On only one sub-sample of the Social Development Scale is the correlation low, +.604, in comparison to the others. The data suggests that for the whole sample, Self Help produces the strongest agreement, followed by Language Development, Motor Development, Cognitive Development, and finally Social Development.

It would seem that the differences between boys and girls is also the largest for the Social Development Scale. Self Help and Cognitive Development appear to present a moderate degree of differences between boys and girls. The least amount of

differences were found in the Language Development and the Motor Development Scale. As a rule, in each case, the degree of agreement between teachers and parents was much stronger for boys than for girls.

The large number of cases, 290 children whose parents had completed the ratings, allowed for several "splits" of the data. Table 3.7 presents the mean teacher/parent correlation using several sub-groups of children who were three, four, and five years old at the time of testing. Some interesting patterns emerged, as can be seen below.

Table 3.7 Pearson Product-Moment Correlation Coefficients for Teacher - Parent Comparisons for the Five Major Scales, For Samples of Three, Four and Five Year Old Children.

Total Scale	Sample Size and Pearson's Correlation " R's "					
	3 Years		4 Years		5 Years	
	N	Corr	N	Corr	N	Corr
1. Self Help	73	.627	88	.699	63	.855
2. Motor Development	74	.658	86	.676	71	.681
3. Cognitive Development	73	.630	89	.734	68	.689
4. Language Development	66	.654	78	.771	69	.775
5. Social Development	68	.583	85	.694	68	.649

All Coefficients are Significant at the .001 level.

It is evident from Table 3.7 that there are very few differences in the degree of teacher - parent correlation which are related to ages, at least not in this sample. The size of the N's in most cases is sufficient to lend credibility to the finding. That is, parents

of 3 year olds, 4 year olds, and 5 year olds do not differ to a very obvious degree in their ratings with teachers.

Table 3.8 Pearson Product-Moment Correlation Coefficients for Teacher - Parent Comparisons for the Five Major Scales, Comparing Fall and Spring Testing Samples.

	Sample Size and Pearson's Correlation " R's "			
	Total Scale	Fall N	Fall Corr	Spring N	Spring Corr
1.	Self Help	171	.767	102	.880
2.	Motor Development	172	.681	111	.848
3.	Cognitive Development	174	.717	111	.825
4.	Language Development	153	.760	111	.882
5.	Social Development	164	.642	110	.816

All Coefficients are Significant at the .001 level.

What is clearly evident from Table 3.8 is that the degree of agreement between the teacher and the parent is substantially higher during the Spring testing that it is in the Fall. This is not really an unexpected result. Since the teacher and parent have been working together for nearly a year at the time of the Spring testing, they know the children better, and their ratings are much closer.

In summary, we found the ratings of the teachers and the parents to be moderately close. The correlations between the teachers and the parents were typically between +.70 and +.85. These are substantially strong levels of agreement between the teachers and the parents. There seemed to be a slight degree of better agreement between parents of boys in our sample than girls. It should be

remembered that there were about twice as many boys as girls in this sample.

The strongest finding of this analysis was that the degree of agreement between the teacher and the parent is much stronger in the Spring testing as opposed to the Fall testing. From this data we had no way to determine whether the parents had moved closer to the teacher ratings, or whether the teachers had moved closer to the parent ratings in the Spring. Overall, we were very impressed with the degree of agreement between the teacher and the parents.

Section 4. - Teacher and Parent Cronbach's Alphas

As had been stated in the previous section, one of the critiques of The Five P's has suggested that Cronbach's Alphas should be computed for the scales. Cronbach's Alpha is a measure of the internal consistency of an additive scale. It is a standard technique for measuring the reliability of a scale.

> "A more generalizable method of estimating internal consistency has been developed by Cronbach (1951) and is called coefficient alpha. Coefficient alpha is the average split-half correlation based on all possible divisions of a test into two parts." (Salvia & Ysseldyke, 1985).

Earlier studies which had been done with this analysis had used restricted samples of children at Variety Pre-Schooler's Workshop. Since it was possible to use the teacher and parent ratings which had been collected in this project for this analysis it was decided to include an analysis of both the teacher and parent ratings using Cronbach's Alphas. This part is reported in this section because the total sample of 370 children and 290 parents in the schools reported in Section 3 of this research report was also used for this analysis.

The data on this sample of 370 children who had been rated by teachers, and 290 of those children whose parents had also rated their children using The Five P's, has been given in Section 3 of this report. These children came from nine different schools from five geographic areas. The children were from seventy-nine different classes, and from four different time periods in the project. It was felt that these factors help to assure that the sample was diverse.

The data in this section was organized by the large scales, Classroom Adjustment, Self Help, Motor Development, Cognitive Development, Language Development, and Social Development. As with the comparison of teacher and parent scores, the Alpha analysis

was built on additive scores which were the same as those used in the previous analysis. Total summative scores for both teachers and parents had been calculated and Cronbach's Alphas were computed using standard computer statistical programs from SPSSX, Statistical Packages for the Social Sciences, X Supplement (1985). The decision was made to allow the computer program to standardize the scores, and Standardized Item Alphas are reported in the following tables. Tabel 4.1 gives the data on the Cronbach's Alphas for teacher ratings.

Table 4.1 - Summary of Cronbach's Alphas for Teacher Ratings Using Total Scale Scores, Presented for all Children All Boys, and All Girls

	Sample Size and Cronbach's Standardized Alphas					
	All		Boys		Girls	
Scale	N	Alpha	N	Alpha	N	Alpha
1. Classroom Adjustment	362	.845	230	.853	132	.827
2. Self Help	353	.944	226	.946	127	.941
3. Motor Development	366	.921	233	.921	133	.922
4. Cognitive Development	359	.932	228	.935	131	.927
5. Language Development	352	.959	222	.960	130	.958
6. Social Development	363	.954	229	.957	134	.946

All Coefficients are Significant at the .001 level.

Table 4.2 gives the data on the parent scores.

Table 4.2 - Summary of Cronbach's Alphas for Parent Ratings Using Total Scale Scores, Presented for All Children, All Boys, and All Girls

	Sample Size and Cronbach's Standardized Alphas					
	All		Boys		Girls	
Scale	N	Alpha	N	Alpha	N	Alpha
1. Classroom Adjustment	-	-	-	-	-	-
2. Self Help	281	.928	175	.932	106	.917
3. Motor Development	284	.911	178	.913	106	.907
4. Cognitive Development	275	.921	173	.923	102	.916
5. Language Development	274	.956	172	.958	102	.952
6. Social Development	272	.943	172	.948	100	.928

All Coefficients are Significant at the .001 level.

As a measure of the reliability of a scale, Cronbach's Alpha should follow other general criteria for the reliability of a scale. One of the most stringent criterion for scales is quoted below, from a standard assessment book in the field of handicapped children.

> "If a test score is used to make a decision for one student, a much higher standard of reliability is demanded. When important educational decisions, such as tracking and placement in a special class, are to be made for a student, the minimum standard should be .90. When the decision being made is a screening decision, such as a recommendation that a child receive further assessment, there is still need for high reliability. For screening devices, we recommend a .80 standard." (Salvia & Ysseldyke, 1985).

It can be seen with clarity that the Cronbach's Alphas for both the teachers which are reported in Table 4.1 and for the parents in

Table 4.2 meet the criterion for using The Five P's as an instrument which can be applied to individual children. All of the Cronbach's Alphas reported in Tables 4.1 and 4.2 are at or above the .90 level. It is exceptionally exciting to note that the Alphas from the parents data are also at such a high level.

The data in Table 4.1 and Table 4.2 seem so consistently good that few trends are evident. There seem to be few differences between the ratings of the teachers and the ratings of the parents. For both the teachers and the parents the ratings are so consistent that few differences appear among the sub-groups which were analyzed.

In summary, both the data the teachers and the parents produce on the scales is useful for programming of individual children. As a measure of The Five P's reliability, the data from the Cronbach's Alpha analysis is highly supportive of using the scale for individual educational programs for handicapped children.

Section 5. - Test Retest Reliability Study of Teacher and Parent Ratings

One of the major goals of The Five P's Replication Study was to replicate a series of reliability studies on The Five P's which had been done in the past five years. Those studies had been done at Variety Pre-Schooler's Workshop using children, parents and teachers in the agency. The results of those studies had been very strong, producing for the teachers a level of reliability for most of the scales above +.90 which is the professional standard for scales which are used with individual children.

The goal in the study has been to present evidence to the field that those studies which had been done at VPSW could be replicated with other children, parents, and teachers in other parts of the country. At the onset of the study, the parent was asked to rate his/her child and the teacher was asked to rate all of the children in his/her class, and to give the rating scale to one of the project staff when it was completed.

Approximately two to three weeks after the scales had been completed and returned to the project staff member, the teacher and parent were asked to repeat the evaluation on randomly selected children. The teacher and parent did not know they would be asked to repeat the measurement. The children who were choosen as a part of the "Test Retest" sub-sample were selected randomly from the class lists. Approximately 37% of the total of 370 children were selected as participants in the Test Retest part of the study. A total of one hundred thirty-seven (137) children were chosen.

Table 5.1 presents the distribution of those 137 children in terms of the schools they were from, boys or girls, and the number of classes. It should be noted that a total of 60 classes were represented in this part of the study. No children from Variety Pre-Schooler's Workshop were included in this sample.

Table 5.1 - Children in Test Retest Sample, by Schools, Total Number of Children, Boys, Girls and Number of Classes

School	Total # Children	Boys	Girls	Total # Classes
Maine Waban Project	10	6	4	4
Florida Baudhuin School	23	14	9	9
Indiana Crown Point	18	12	6	9
Indiana Hammond	2	1	1	2
Illinois Crete	16	13	3	7
California Speech & Language Development Program	15	10	5	10
California Azteca Head Start	10	7	3	19
California ABC Child Development	8	4	4	9
New York L.I.J. Preschool Development Program	35	19	16	10
Totals	137	86	51	60

Table 5.2 presents the distribution of this sample relative to the ages and sex of the children in this Test Retest sample. Table 5.3 presents the distribution of this sample relative to the time at which the Test Retest part of the study took place. This was done over four time periods, the Fall of 1986, the Spring of 1987, the Fall of 1987, and the Spring of 1988. The majority of Test Retest cases were completed in the Spring of 1987 or the Fall of 1987.

Table 5.2 - Distribution of Children in Test Retest Sample by Age and Sex

Age in Months	Total	Boys	Girls
12 - 23	1	1	0
24 - 35	10	7	3
36 - 47	34	19	15
48 - 59	42	23	19
60 - 71	40	27	13
72 - 83	10	9	1
84 - 89	0	0	0
Totals	137	86	51
Mean:	53.6	54.8	51.4

Table 5.3 - Distribution of Children in Test Retest Sample By the Time of the Testing of the Children

Time of Testing	Total	Boys	Girls
Fall of 1986	14	9	5
Spring of 1987	54	35	19
Fall of 1987	60	37	23
Spring of 1988	9	5	4
Totals	137	86	51

Table 5.4 presents the distribution of the children by disability who were in the Test Retest part of the study. Again, these children were chosen by a random process, and fortunately they seem to represent a wide variety of handicaps. While the sample for the Test Retest study does not approximate all handicapped children, it can be asserted that it is diverse enough to be acceptable.

Table 5.4 - Distribution of Children in the Test Retest Sample By Disability Used for Funding Purposes

Disability Category	Total	% of Total	Boys	Girls
Autistic	7	5.1	5	2
Emotionally Disturbed	3	2.2	3	
Learning Disabled	1	.7	1	
Mentally Retarded	8	5.8	6	2
Hard of Hearing	4	2.9	2	2
Speech Impaired	56	40.5	38	18
Visual Impairment	2	1.5		2
Orthopedically Impaired	11	8.0	6	5
Other Health Impaired	4	2.9	1	3
Multiply Handicapped	14	10.2	8	6
Attention Deficit Disorder	1	.7	1	
Downs Syndrome	3	2.2	1	2
Developmental Delay	21	15.3	13	8
Emotionally Disturbed/ Abused	1	.7		1
No Data Given	1	.7	1	
Totals	137		86	57

Tables 5.5 and 5.6 present the summaries of the results of this Test Retest analysis, for teachers in Table 5.5 and for parents in Table 5.6 It can be seen that the results for teachers is very acceptable, all of the scales except for Classroom Adjustment scores above the +.90 level which is the standard for using the scales for individual programming. The scale of Classroom Adjustment is in the high part of the .80's (.870) which allows it to be used for screening purposes. These results substantiate the findings which we had presented earlier from our studies at Variety Pre-Schooler's Workshop. Clearly, these results when combined with the Cronbach's Alphas give strong evidence that The Five P's can be used by teachers in a very reliable manner.

Table 5.5 - Test Retest Pearson Correlations for Teachers

	Sample Size and Pearson's Correlation " R's "					
	All		Boys		Girls	
Scale	N	Corr	N	Corr	N	Corr
1. Classroom Adjustment	134	.870	85	.847	49	.907
2. Self Help	124	.940	80	.941	44	.944
3. Motor Development	129	.931	83	.944	46	.910
4. Cognitive Development	133	.919	84	.914	49	.924
5. Language Development	124	.931	77	.935	47	.924
6. Social Development	133	.934	84	.934	49	.937

All Coefficients are Significant at the .001 level.

Table 5.6 - Test Retest Pearson Correlations for Parents

	Sample Size and Pearson's Correlation " R's "					
	All		Boys		Girls	
Scale	N	Corr	N	Corr	N	Corr
1. Classroom Adjustment	-	--	-	--	-	--
2. Self Help	88	.914	57	.919	31	.904
3. Motor Development	86	.892	56	.915	30	.857
4. Cognitive Development	92	.886	60	.901	32	.855
5. Language Development	84	.892	54	.874	30	.943
6. Social Development	85	.845	56	.830	29	.887

All Coefficients are Significant at the .001 level.

Table 5.6 which presents the data for the parents is equally as important in terms of the results. The Self Help Scales meet the criterion for use with individual children. The other scales meet the criterion for use as screening instruments. While the ratings of the parents were not as strong as those of the teachers, neither is their training and experience equal to that of the teachers. It should also be remembered that parent ratings reflect a first time use. It is reasonable to assume that experience and repeated use (at 6 month intervals) would improve parent rating scores.

Because of the size of the Test Retest sample, N = 137, it was not possible to do all of the analyses which were done in other sections of this research report. It was possible to sort the data in three ways, children who were 4 or 5, data from the fall testing, and data from the spring testing. Those data sorts gave groups for the teachers and parents which could be looked at more closely. Table 5.7 gives this data for the teachers and Table 5.8 gives this

data for the parents.

Table 5.7 - Test Retest Pearson Correlations for Teachers for Certain Groups

	Sample Size and Pearson's Correlation " R's "					
	4 & 5 Yrs.		Fall		Spring	
Scale	N	Corr	N	Corr	N	Corr
1. Classroom Adjustment	80	.817	73	.857	61	.897
2. Self Help	74	.895	71	.940	55	.943
3. Motor Development	77	.936	70	.907	60	.958
4. Cognitive Development	80	.889	73	.924	60	.907
5. Language Development	77	.893	66	.927	58	.934
6. Social Development	79	.897	72	.936	62	.938

All Coefficients are Significant at the .001 level.

Clearly, the above analyses suggest that in most cases the teacher evaluations hold up to the .90 standard for individual children. In this analysis there does not seem to be any superiority of the fall or spring testing, both sets of scores are very similar. Table 5.8 gives the same data for the parents.

Table 5.8 - Test Retest Pearson Correlations for Parents for Certain Groups

Scale	Sample Size and Pearson's Correlation " R's "					
	4 & 5 Yrs.		Fall		Spring	
	N	Corr	N	Corr	N	Corr
1. Classroom Adjustment	-	--	-	--	-	--
2. Self Help	48	.949	52	.888	36	.944
3. Motor Development	47	.856	54	.842	33	.948
4. Cognitive Development	49	.901	54	.849	38	.931
5. Language Development	47	.949	51	.893	34	.919
6. Social Development	46	.839	50	.898	35	.797

All Coefficients are Significant at the .001 level.

The data from Table 5.8 relative to the parents performance in the Test Retest reliability study suggests, once again, that the level of reliability for the most part is on the "screening" level. Some of the results for the parents in the spring part of the study are really encouraging. All in all the data from the parents is very strong.

In summary, this section studied a Test Retest form of reliability of The Five P's. The data for the teachers suggests that they score above the .90 standard for reliability for instruments which will be used for planning individual programs for children. This suggests strongly that these results which we found in earlier studies at VPSW have indeed been replicated.

The data from the parents part of the Test Retest study suggests that the ratings of the parents meet the standards for

using the data for screening purposes. We assert that this is really outstanding, and suggest that parents can indeed make valuable assessments of their own children.

Section 6 - Teacher and Parent Norms for the Major Scales of The Five P's

The third research goal as specified in the research proposal was the beginning of a process which would establish norms for the scales. It was understood that at some point in the research development of The Five P's we would have to establish norms for "non-handicapped" children, against which we could compare the scores of a child who was suspected of having a handicap. At that point, The Five P's could be used as a screening instrument. That study has been planned and we hope to be able to carry it out in the near future using children from several parts of the country.

At the same time, the present study did allow us to start the process of norming the scales on handicapped children. We had collected a total of 370 scales from children in several different parts and kinds of communities in the country. To this sample we added a group of 184 scales which came from the Spring 1988 testing at VPSW. This gave us a total of 554 individual children who had been tested using the scale, and it was this sample of 554 handicapped children upon which the norms described in this section of the report are based.

The following tables present the data on the characteristics of those 554 children who were included in the normative sample. Table 6.1 presents the schools in which the children in the norm sample were enrolled. Table 6.2 breaks down the normative sample by the ages and sex of the children.

Table 6.1 - Children in Sample, Teacher-Parent Correlations, By Schools, Totals, Boys, Girls and # of Classes

School	Total # Children	Boys	Girls	Total # Classes
Maine Waban Project	26	19	7	4
Florida Baudhuin School	65	40	25	9
Indiana Crown Point	45	29	16	9
Indiana Hammond	6	4	2	2
Illinois Crete	51	37	14	7
California Speech & Language Development Center	45	28	17	10
California Azteca Head Start	26	17	9	19
California ABC Child Development	13	8	5	9
New York L.I.J. Preschool Development Program	93	52	41	10
New York VPSW	184	139	45	19
Totals	554	373	181	98

Table 6.2 - Distribution of Children by Age and Sex

Age in Months	Total	Boys	Girls
12 - 23	4	2	2
24 - 35	59	41	18
36 - 47	134	89	45
48 - 59	183	123	60
60 - 71	128	88	40
72 - 83	45	29	16
84 - 89	1	1	0
Totals	554	373	181

Table 6.3 presents the distribution of those 554 children in the normative sample according to the time at which the data was collected. It can be seen that most of the data was collected in

the Fall of 1987 and the Spring of 1988.

Table 6.4 presents the disability breakdown of the children in this normative sample of 554 children.

Table 6.3 - Distribution of Children by Time of Testing and Sex

Time of Testing	Total	Boys	Girls
Fall of 1986	41	26	15
Spring of 1987	141	91	50
Fall of 1987	164	103	61
Spring of 1988	208	153	55
Totals	554	373	181

Table 6.4 - Distribution of Children in Sample by Disability

Disability Category	Total	% of Total	Boys	Girls
Austistic	20	3.6	15	5
Emotionally Disturbed	21	3.8	15	6
Learning Disabled	9	1.6	6	3
Mentally Retarded	24	4.3	16	8
Hard of Hearing	11	2.0	3	8
Speech Impaired	304	54.9	222	82
Visual Impairment	4	.7	1	3
Orthopedically Impaired	22	4.0	12	10
Other Health Impaired	9	1.6	4	5
Multiply Handicapped	47	8.5	28	19
Attention Deficit Disorder	4	.7	4	0
Conduct Behavior Disorder	2	.4	2	0
Pervasive Development Disorder	1	.2	1	0
Downs Syndrome	6	1.1	3	3
Developmental Delay	59	10.6	38	21
Emotionally Disturbed/ Abused	3	.5	1	2
No Data Given	8	1.4	2	6

In Tables 6.5 and 6.6 which follow, two sets of norms are provided, the hypothetical level at which a child of a certain age

should function, and the real or actual mean scores which we found in our data on handicapped children. As before, the scores were constructed by adding points given, two points for a "yes", one point for a "sometimes" and zero points for a score of "no". To estimate the "hypothetical" norm levels we constructed scores by adding up the points to the middle of the age category and accepted those scores as an "approximation" of what normal children should achieve on the scores. Those approximations are listed as the "hypothetical" norms in the tables which follow.

The concern at this point was to begin to establish a set of norms which focused on the performance of handicapped children. Using the hypothetical mean score on the scales for a hypothetical group of normal children as described in the previous paragraph, we compared our real data from this study of handicapped children. As the data in this section will indicate, the "real" data we collected was well below the hypothetical levels.

The norms which we have provided in this section of the report and in Appendices 1 and 2 should be considered "experimental". The norms for the handicapped children in our studies are well below the expected levels. If the norm tables are used to use The Five P's as a screening instrument for preschool programs where children are "suspected" of being handicapped we strongly recommend that the 40th percentile serve as a cut-off point. That is, if the scale is applied to a child at risk, and his/her score falls below the 40th percentile in our norms of handicapped children, there is a good possibility that the child needs further evaluation.

Table 6.5 - Mean Scores for Teachers on Each of the Major Scales

Scale	Means	Sample Size and Mean Score for Age Groups: 3 Years N	3 Years Mean	4 Years N	4 Years Mean	5 Years N	5 Years Mean
1. Classroom Adjustment	Hypothetical		28		39		44+
	Actual	132	29.3	180	35.5	125	37.5
2. Self Help Scales	Hypothetical		74		103		118+
	Actual	130	69.9	178	90.8	123	101.8
3. Motor Development	Hypothetical		64		85		96+
	Actual	132	55.4	181	68.9	128	77.2
4. Cognitive Development	Hypothetical		53		72		82+
	Actual	134	45.7	183	60.2	128	66.2
5. Language Development	Hypothetical		99		125		138+
	Actual	127	73.7	176	96.3	126	109.7
6. Social Development	Hypothetical		109		142		158+
	Actual	131	96.1	183	116.7	127	129.3

Once again, we would caution the users of the above tables to use the information with care. We have presented teacher data which is "experimental" and will be updated. Full information of other percentiles on the above scales can be found in Appendix 1 for teachers and Appendix 2 for parents.

Table 6.6 which follows presents the mean score on each of the major scales for the sample of parents. Again, we wish to note that the data which follows is "experimental" and will be updated as we collect more information from a more varied population.

Table 6.6 - Mean Scores for Parents on Each of the Major Scales

Scale	Means	Sample Size and Mean Score for Age Groups					
		3 Years		4 Years		5 Years	
		N	Mean	N	Mean	N	Mean
1. Classroom Adjustment	Hypothetical		--		--		--
	Actual	--	--	--	--	--	--
2. Self Help Scales	Hypothetical		74		103		118+
	Actual	118	70.4	137	89.5	93	95.5
3. Motor Development	Hypothetical		64		85		96+
	Actual	116	55.7	139	66.3	97	75.6
4. Cognitive Development	Hypothetical		53		72		82+
	Actual	116	50.0	141	62.3	95	66.5
5. Language Development	Hypothetical		99		125		138+
	Actual	113	84.8	139	103.3	96	108.6
6. Social Development	Hypothetical		109		142		158+
	Actual	113	105.4	137	123.8	94	125.5

Section 7. - User Reactions to The Five P's

Parents and teachers who participated in The Five P's Replication Study were asked to complete User Reaction Questionnaires after using The Five P's. During the two year project, 168 out of 290 parents and 60 out of 63 teachers completed and returned their questionnaires. The research team attempted to retrieve the missing surveys through contact with the regional consultants, but met with little success.

User Reaction Questionnaires asked parents and teachers to rate the usefulness of the individual Five P's scales as well as to answer a series of questions. Copies of these forms are found in Appendix 3. Parents and teachers were asked to rate the usefulness of each scale on a continuum of 1 to 5; 1 being least useful, 3 being neutral, 5 being most useful. For purposes of these analyses, ratings of 1 and 2 were grouped together and labeled "negative"; a rating of 3 was neutral; and ratings of 4 and 5 were grouped together and labeled "positive".

Table 7.1 reports the percentage of parents who rated The Five P's scales positive, neutral, or negative with respect to their usefulness. A majority of the parents found the scales useful.

Table 7.1 - Parent Ratings of the Usefulness of The Five P's Scales

	Percentage Scores (N=162)			
Scale	Negative (1-2)	Neutral (3)	Positive (4-5)	No Response
Classroom Adjustment	-	-	-	-
Self Help Scales	22.0	24.5	50.6	2.9
Motor Development	12.3	20.9	63.1	3.7
Language Development	12.6	21.4	61.9	4.1
Social Development	10.3	17.3	69.1	3.3
Cognitive Development	11.1	24.1	59.9	4.9

In Table 7.2 the percentage scores for the positive and neutral ratings were combined and the scales were ranked in terms of usefulness. The table shows that 86.4% of the parents in the study found the Social Development scales useful; 84% of the parents found the Motor Development and Cognitive Development scales useful; 83.3% of the parents found the Language Development scales useful; and 75.1% found the Self Help scales useful.

Table 7.2 - Parent Rankings of The Five P's Scales

Scale	Percentage Score (Positive Plus Neutral Ratings)
Social Development	86.4
Motor Development	84.0
Cognitive Development	84.0
Language Development	83.3
Self Help Scales	75.1

Table 7.3 reports the percentage of teachers who rated The Five P's scales positive, neutral or negative with respect to their usefulness. A majority of the teachers found the scales useful.

Table 7.3 - Teacher Ratings of the Usefulness of The Five P's Scales

	Percentage Scores (N=60)			
Scale	Negative (1-2)	Neutral (3)	Positive (4-5)	No Response
Classroom Adjustment	10.0	30.0	53.3	6.7
Self Help Scales	23.3	27.8	43.3	5.6
Motor Development	17.5	26.7	50.0	5.8
Language Development	13.3	35.0	46.7	5.0
Social Development	9.4	34.4	51.7	4.4
Cognitive Development	20.0	25.0	50.0	5.0

In Table 7.4, the percentage scores for the positive and neutral ratings were combined and the scales were ranked in terms of usefulness. The table shows that 86.1% of the teachers found the Social Development scales useful; 83.3% of the teachers found the Classroom Adjustment scale useful; 81.7% of the teachers found the Language Development scales useful; 81.1% of the teachers found the Self Help scales useful; 76.7% found the Motor Development scales useful; and 75.0% found the Cognitive Development scale useful. It is interesting to note that both the parents and the teachers found the Social Development scales to be the most useful.

Table 7.4. - Teacher Rankings of The Five P's Scales

Scale	Percentage Score (Positive Plus Neutral Ratings)
Social Development	86.1
Classroom Adjustment	83.3
Language Development	81.7
Self Help Scales	81.1
Motor Development	76.7
Cognitive Development	75.0

Parent Reactions

Parents were asked a series of questions concerning the role The Five P's played in: their understanding of early childhood development; their ability to develop appropriate expectations and to set more realistic goals for their child; and their working relationship with their child's teacher. The last question on the survey asked for general comments and/or problems they had about The Five P's.

Table 7.5 shows how parents answered the above questions. Answers were judged to be "positive", "negative", and "not sure". A majority of the parents who responded to the questions did so positively: 61.7% felt The Five P's increased their understanding

of early childhood development; 54.9% felt it helped them set more realistic goals for their child; and 51.9% felt the scales improved their working relationship with the teacher.

Table 7.5. - Parent Responses to Survey Questions

Question	Percentage Scores (N=162) Negative	Not Sure	Positive	No Response
Helped parent understand early childhood development	18.5	3.1	61.7	16.7
Helped parents set goals	17.3	7.4	54.9	20.4
Helped parents work with teacher	17.9	6.8	51.9	23.4

In general, parents felt that The Five P's gave them a better understanding of early childhood development and behaviors that interfered with their child's development:

- "I hadn't realized all the different things a child is supposed to be able to accomplish. Seeing it in print made me realize what my son really could or couldn't do." (Midwest)
- "I got a clearer picture of what children at his age level were capable of." (Northeast)
- "Yes, I was able to clearly see the behaviors that interfered with my son's abilities." (Northeast)

Other parents agreed that the scales contributed to their understanding but also pointed out the distress generated by the process of evaluation:

- "It only made it painfully clear how far behind my multiply handicapped child will always be." (Midwest)

Several parents indicated that while The Five P's did not provide them with new information on the early childhood developmental sequences since they had already acquired this, it did reinforce their understanding of these markers.

Parents also found The Five P's to be a useful tool for developing appropriate expectations and setting realistic goals for their children:

- "Helped me focus in more clearly on my child's strengths and weaknesses." (Midwest)
- "Most definitely! A parent is not aware of the missing developmental steps unless they are made aware of the developmental order of things. This may cause a parent to expect too much of a child who may not have those basic developmental prerequisites." (Florida)

A majority of parents felt that The Five P's helped strengthen their relationship with their child's teacher. Parents felt reassured that the teachers really knew their child. They indicated they were more inclined to discuss problems and gains with the teachers then they were before The Five P's was used.

- "Yes, it gave each of us more understanding or awareness of the child so we could work together." (California)
- "We can exchange ideas on what we know the child is capable of doing and what should be expected." (Midwest)
- "It helped us pull in the same direction at the same time." (Florida)
- "The Five P's made me realize how well the teachers know my child and his problems. I was very impressed and I feel more comfortable with my child's school placement. I am also more likely to confide in his teacher if a problem arises." (Florida)

- "I am able to ask questions that I was not able to ask. The Five P's gave me an opportunity to express myself better." (Northeast)

A small number of parents stated that they already had a partnership with their child's teacher and school prior to using The Five P's. The Five P's added another dimension to their discussions.

An overwhelming majority of parents commented positively about The Five P's despite their initial skepticism and uncertainty:

- "I found it very much worthwhile! It took 2-3 hours the first time and lots of thought, but when you see the big strides in progress on paper, it's wonderful!..." (Midwest)
- "Because my child is 5 years old, I would have liked the list to continue up to 72 months. I think it is a very good program, especially because of the parent involvement. That motivates the parents much more to help the school and to understand their child's problems better." (Florida)
- "I feel The Five P's is a very good program." (New England)
- The Five P's is great but very time consuming. I'm glad the teachers take the time to do it. The Five P's help me see my child in a classroom environment and how he handles himself." (California)

Several themes emerged from the parents' general comments about The Five P's: the need for additional scale items from 5 years to 7 years; the length of The Five P's; and the need for more feedback and a better dialogue between school and home about the behavior items on the scales. Some parents struggling with rating choices thought their difficulty was related to the lack of clarity of some scale items. Others commented on the pain that was aroused when they had to make judgments and document their child's disabilities.

- "Some questions needed to be more explained. They tended to be a little confusing and had to be read several times to understand." (Midwest)
- "Too long and complex - Not enough was relevant as my child is at top age on the scales..." (Florida)
- "The checklist itself was overwhelming to me -- to see how much work my son needed. However, I need to see where he is and face it. It was encouraging that he did have strengths and very few interfering behaviors." (Florida)
- "It's a good overall information guide covering all areas, but one needs more feedback when one compares it to what's going on at school." (Northeast)
- "All it is, is a questionnaire asking about my child's behavior at home, but it is not really discussed in school or among the teachers and parents the way it should be. The parents need more feedback from it..." (Northeast)
- "It might be helpful in a normal preschool setting but it seems only a painful insult to parents of handicapped children. At this stage we know their weaknesses and don't need to be reminded of how much they should be able to do. It just frustrates." (Midwest)

Teacher Reactions

Teachers were also asked a series of questions concerning the role The Five P's played in: their understanding of early childhood development; their ability to develop appropriate expectations and to set realistic goals; and their working relationships with the parents of the children in their class. The last question on the survey asked for general comments and/or problems they had about The Five P's.

Table 7.6 shows how teachers answered the above questions. Answers were judged to be "positive", "negative", and "not sure". A majority of the teachers who responded to the questions did so positively: 58.3% felt that The Five P's increased their understanding of early childhood development; 66.7% felt it helped them set more realistic goals for the children; and 68.3% felt the scales improved their relationship with the parents.

Table 7.6 - Teacher Responses to Survey Questions

Percentage Scores (N=60)

Question	Negative	Not Sure	Positive	No Response
Helped teacher understand early childhood development	33.3	8.3	58.3	0
Helped teacher set goals	26.7	3.3	66.7	3.3
Helped teacher work with parents	23.3	5.0	68.3	3.3

In general the teachers stated that The Five P's increased and/or reinforced their understanding of early childhood development and behaviors that interfered with learning;

- "Yes, it helped me become aware of the development of children at different age levels." (California)
- "I thought it was nicely broken down to give me an overall view of development." (Midwest)
- "It supports my understanding of early childhood development. I appreciate the addition of interfering behaviors. It will benefit many educators and parents." (Midwest)
- "The Five P's provides a nice framework and timeline that can help a teacher organize behavorial observations." (California)

- "The developmental milestones are clearly defined by age which helped me to teach parents about the sequencing of learned skills." (Northeast)
- "Yes. The progression of stages and normal child development is easier to understand." (New England)

Teachers who worked with children who were not verbal and were developing alternate communication systems using sign language felt that the language sections should address some specific skills in this area. These teachers felt The Five P's was helpful with respect to early childhood development except for this one area:

- "Yes, except for the language sections as there is no developmental skills for non-verbal students learning manual communication." (California)

Experienced teachers also commented that they felt the organization of the developmental skills and interfering behaviors would be useful for training teachers:

- "I feel it was very competent in this area... It would be good for a student teacher or a new teacher." (Midwest)

The second question on this survey asked teachers about The Five P's impact on setting classroom goals for each child. Majority of the teachers commented that The Five P's helped them develop appropriate expectations and choose realistic goals for the children they taught. More specificially, they felt that interfering behaviors and the graphic profile played an important role in the goal setting process:

- "I like the interfering behaviors sections to help set goals." (Midwest)

- "The interfering behaviors section would be most useful in designing more appropriate behavior goals." (Midwest)
- "Yes. Objectives were easily pulled from the checklist and realistic in content." (Florida) "It is particularly useful in some areas: i.e., self help, classroom adjustment, relationships to adults and peers." (California)
- "I enjoyed the graphing results and having a clear picture of a child's particular strengths and needs." (Florida)

Teachers whose children were older or who used sign language felt that additional items at the 6-7 year old level and on the language scales specific to signing should be added to make The Five P's more valuable to them for goal setting.

Teachers across the nation indicated that The Five P's helped them improve their relationships with parents:

- "The instrument gave parents and teachers the opportunity to evaluate the child on an identical number of skills thus enabling more open and honest communication." (Florida)
- "The Five P's helped me to understand how parents perceive their children - and how different that perception may be from my perception." (California)
- "Yes - parental input and involvment in testing procedures is very helpful for a total understanding of a child's needs and skills." (California)
- "Yes. It gave us a common interest to create a partnership and also helped them become aware of their child's level." (Midwest)
- "Parents felt they took an active part in completing the assessment and that their input was valuable." (Northeast)

- "Yes. I was able to form a better relationship with parents and it opened our lines of communication much more. It made them a part of the program." (New England)
- "We don't have much communication with our parents due to various obstacles; but with The Five P's we could set up actual meetings where the parents did show up..." (New England)

A few teachers commented that their work with parents did not change because parents did not complete The Five P's:

- "No. Most parents are busy and don't want to take the time to complete The Five P's." (California)

Teachers were also asked to comment about The Five P's and/or problems or concerns they had. Most teachers commented that they had no problems with the instrument:

- "I feel that the instrument and the process by which you obtain the data on children is outstanding. Parents are always asked to give input into the development of IEP's and for the first time in my years of working with families, I have been introduced to an instrument that can give them a knowledge base regarding child development and behaviors that may interfere. Congratulations!" (Midwest)
- "...I myself like the assessment and especially the graph." (New England)

Some teachers voiced some concerns with The Five P's. Several themes tied these comments together: The Five P's was too long; The Five P's duplicated the assessment just completed; the language of some items was ambiguous; items beyond five years were needed; and the age norms should be eliminated:

- "I really feel it is too long and complicated for a program such as ours. It if were a full day, it would be easier on the teachers." (Northeast)
- "Had we not just completed our own evaluation of each student, The Five P's would have been helpful." (Midwest)
- "With our extensive testing (Not only by classroom teachers, but psychologists, LD teachers, speech-language pathologist) The Five P's were re-phrasing of existing data." (Midwest)
- "Some of the rating questions were vague." (New England)
- "Chronological ages should be omitted from the checklist. Skills should be mastered, emerging or non-existant but not according to age norms. Devastating for a parent to state a 6 year old does not have an 11 month skill. Some of the questions were ambiguous. The 2 part questions were confusing." (Florida)

Summary

Parents and teachers reacted positively to The Five P's assessment approach. Both groups found The Social Development Scales to be the most useful. Parents indicated that The Five P's increased their understanding of early childhood development; enabled them to develop appropriate expectations and goals; and improved their relationship with their child's teacher. For teachers, The Five P's was most helpful in formulating goals and developing a partnership with the parents. Since teachers are trained in the field of early childhood development, The Five P's served to reinforce their understanding of development.

References

American Psychological Association (1982). Ethical principles in the conduct of research with human participants. Washington D.C.: American Psychological Association.

Bloch, J. (1978). Impaired children: Helping families through the critical period of first identification. Children Today. Washington, D.C.: Office of Child Development, Children's Bureau, Dept. of Health, Education and Welfare.

Bronfenbrenner, U. (1979). The ecology of human development: Experiments by nature and design. Cambridge, MA: Harvard University Press.

Chess, S. & Thomas,A. (1982). Infant bonding: Mystique and reality. American Journal of Orthopsychiatry, 52 (2), pp. 213-221.

Cohen, M.A. & Gross, P.J. (1979). The developmental resources: Behavioral sequences for assessment and program planning. (Vols. 1 and 2). New York: Grune & Stratton.

Cronbach, L.J. (1951). Coefficient alpha and the internal structure of tests. Psychometrika, 16, pp. 297-334.

Hicks, J. & Bloch, J.S. (1987). The Five P's (Parent/Professional Preschool Performance Profile), Technical Manual. Syosset, New York: Variety Pre-Schooler's Workshop.

Lidz, C. (1983, Spring). Emotional disturbance in preschool children. Teaching Exceptional Children, 15 (3), pp. 164-167.

Mallory, B.L. & Kerns, G.M. (1988). Consequences of categorical labeling of preschool children. Topics in Early Childhood Special Education, 8 (3), pp. 39-50.

NAEYC position statement of standardized testing of young children 3 through 8 years of age. Young Children, March 1988, pp. 42-47.

Salvia, J. & Ysseldyke, J.E. (1985). Assessment in special and remedial education, (3rd Ed.). Boston: Houghton Mifflin.

Sparrow, S.S., Balla, D.A., & Cicchetti, D.V. (1984). Vineland adaptive behavior scales. Minnesota: American Guidance.

SPSS Inc. (1988). SPSS-X user's guide, (3rd Ed.) Chicago: SPSS Inc.

Teas-Hester, E. (1985). The Five P's: Parent/Professional Preschool Performance Profile, in Test Critiques: Volume III. Kansas City, MO: Test Corporation of America.

U.S. Department of Labor (1986). Occupational outlook handbook 1986-87 ed. (Bulletin #2250). Washington, D.C.: Bureau of Labor Statistics.

Uzgiris, I.C. & Hunt, J. McV. (1975). Assessment in infancy: Ordinal scales of psychological development. Chicago: University of Illinois Press.

Appendix 1 - Experimental Norms for Teacher Ratings.

Directions:

The following pages present percentile equivalents for raw scores on the six scales, Classroom Adjustment, Self-Help, Motor Development, Cognitive Development, Language Development, and Social Development.

To use the scales, calculate a raw score for a child by adding up the total points for a scale. A score of "yes" gives a child two (2) points for an item, a score of "sometimes" gives a child one (1) point for an item, and a score of "no" gives a child no points for an item. For these norm tables, only the Developmental Skills items are used. Information on norm tables for the use of scores on the Interfering Behaviors is not currently available.

Once the raw score is calculated, go into the table in the column which lists the child's age. These tables are presented for three year old, four year old, and five year old children. Find the raw score which is nearest to the total score you have calculated for that child on that scale. Then move either to the outside left or outside right column and read the percentile equivalent score.

For example, a four year old child whose teacher gives a total raw score on the Cognitive Development Scale of 58 points would be at the 40 th percentile. This would mean that his/her score was higher than 40% of the children in our sample, and lower than 60% of the children.

Because of the preliminary nature of these norm samples, we would recommend that the 40 th percentile score should be used as a cutoff point for screening children on any of the scales for both teacher ratings as well as parent ratings.

Appendix 1.A Teacher Norms for Classroom Adjustment Scale.

Percentile Equivalent:	Raw Scores on Scales 3 yrs.	4 yrs.	5 yrs.	Percentile Equivalent:
95	42	44	44	95
90	41	42	44	90
80	36	41	43	80
70	35	40	42	70
60	33	39	41	60
50	31	37	39	50
40	28	36	38	40
30	25	34	36	30
20	21	30	34	20
10	17	26	29	10
5	13	20	23	5
Sample N =	132	180	125	Sample N
Sample $\bar{X}$ =	29.27	35.53	37.52	Sample $\bar{X}$
Sample SD =	8.81	7.23	6.47	Sample SD

Appendix 1.B Teacher Norms for Self-Help Scale.

Percentile Equivalent:	Raw Scores on Scales 3 yrs.	4 yrs.	5 yrs.	Percentile Equivalent:
95	113	115	118	95
90	105	113	118	90
80	93	110	116	80
70	85	106	115	70
60	78	101	112	60
50	73	95	109	50
40	68	92	106	40
30	56	83	100	30
20	42	76	94	20
10	32	64	78	10
5	19	43	51	5
Sample N =	130	178	123	Sample N
Sample $\bar{X}$ =	69.95	90.79	101.84	Sample $\bar{X}$
Sample SD =	26.47	22.33	21.89	Sample SD

Appendix 1.C Teacher Norms for Motor Development Scale.

Percentile Equivalent:	Raw Scores on Scales 3 yrs.	4 yrs.	5 yrs.	Percentile Equivalent:
95	83	92	96	95
90	76	90	94	90
80	69	84	92	80
70	65	81	90	70
60	61	76	88	60
50	57	72	84	50
40	52	67	80	40
30	48	61	73	30
20	42	54	64	20
10	34	49	49	10
5	23	36	33	5
Sample N =	132	181	128	Sample N
Sample $\bar{X}$ =	55.37	68.93	77.15	Sample $\bar{X}$
Sample SD =	16.59	17.97	19.60	Sample SD

Appendix 1.D Teacher Norms for Cognitive Development Scale.

Percentile Equivalent:	Raw Scores on Scales 3 yrs.	4 yrs.	5 yrs.	Percentile Equivalent:
95	77	81	82	95
90	71	80	82	90
80	64	77	80	80
70	59	73	78	70
60	53	69	76	60
50	47	64	73	50
40	41	58	69	40
30	36	52	64	30
20	27	46	54	20
10	17	32	39	10
5	11	25	31	5
Sample N =	134	183	128	Sample N
Sample $\bar{X}$ =	45.70	60.20	66.21	Sample $\bar{X}$
Sample SD =	19.52	17.70	18.06	Sample SD

Appendix 1.E Teacher Norms for Language Development Scale.

Percentile Equivalent:	Raw Scores on Scales 3 yrs.	4 yrs.	5 yrs.	Percentile Equivalent:
95	127	137	138	95
90	122	134	137	90
80	112	128	135	80
70	100	120	132	70
60	88	113	128	60
50	79	102	121	50
40	64	92	113	40
30	53	84	104	30
20	36	66	88	20
10	19	47	60	10
5	12	31	35	5
Sample N =	127	176	126	Sample N
Sample $\bar{X}$ =	73.72	96.33	109.71	Sample $\bar{X}$
Sample SD =	36.65	32.60	31.60	Sample SD

Appendix 1.F Teacher Norms for Social Development Scale.

Percentile Equivalent:	Raw Scores on Scales 3 yrs.	4 yrs.	5 yrs.	Percentile Equivalent:
95	149	155	157	95
90	143	151	156	90
80	130	145	152	80
70	120	136	149	70
60	111	129	145	60
50	98	123	140	50
40	88	115	130	40
30	76	105	122	30
20	65	96	113	20
10	45	68	90	10
5	30	54	63	5
Sample N =	131	183	127	Sample N
Sample $\bar{X}$ =	96.12	116.68	129.34	Sample $\bar{X}$
Sample SD =	35.32	30.08	29.40	Sample SD

Appendix 2 - Experimental Norms for Parent Ratings.

Directions:

The following pages present percentile equivalents for raw scores on the five scales, Self-Help, Motor Development, Cognitive Development, Language Development, and Social Development.

To use the scales, calculate a raw score for a child by adding up the total points for a scale. A score of "yes" gives a child two (2) points for an item, a score of "sometimes" gives a child one (1) point for an item, and a score of "no" gives a child zero points for an item. For these norm tables, only the Developmental Skills items are used. Information on norm tables for the use of scores on the Interfering Behaviors is not currently available.

Once the raw score is calculated, go into the table in the column which lists the child's age. These tables are presented for three year old, four year old, and five year old children. Find the raw score which is nearest to the total score you have calculated for that child on that scale. Then move either to the outside left or outside right column and read the percentile equivalent score.

For example, a four year old child whose parent gives a total raw score on the Cognitive Development Scale of 62 points would be at the 40 th percentile. This would mean that his/her score was higher than 40% of the children in our sample, and lower than 60% of the children.

Because of the preliminary nature of these norm samples, we would recommend that the 40 th percentile score should be used as a cutoff point for screening children on any of the scales for both teacher ratings as well as parent ratings.

Appendix 2.A Parent Norms for Self-Help Scale.

Percentile Equivalent:	Raw Scores on Scales 3 yrs.	4 yrs.	5 yrs.	Percentile Equivalent:
95	108	114	117	95
90	104	112	116	90
80	92	109	111	80
70	85	104	109	70
60	82	99	104	60
50	75	95	101	50
40	68	90	98	40
30	60	83	93	30
20	45	75	86	20
10	30	60	58	10
5	25	44	49	5
Sample N =	118	137	93	Sample N
Sample $\bar{X}$ =	70.38	89.46	94.45	Sample $\bar{X}$
Sample SD =	25.62	22.06	22.20	Sample SD

Appendix 2.B Parent Norms for Motor Development Scale.

Percentile Equivalent:	Raw Scores on Scales 3 yrs.	4 yrs.	5 yrs.	Percentile Equivalent:
95	80	94	96	95
90	74	90	94	90
80	69	85	90	80
70	65	81	88	70
60	61	72	86	60
50	57	68	80	50
40	52	65	76	40
30	48	63	72	30
20	41	56	63	20
10	35	46	46	10
5	26	32	37	5
Sample N =	116	139	97	Sample N
Sample $\bar{X}$ =	55.73	66.33	75.65	Sample $\bar{X}$
Sample SD =	15.96	17.75	19.46	Sample SD

Appendix 2.C Parent Norms for Cognitive Development Scale.

Raw Scores on Scales

Percentile Equivalent:	3 yrs.	4 yrs.	5 yrs.	Percentile Equivalent:
95	75	82	82	95
90	71	80	82	90
80	65	78	80	80
70	62	74	79	70
60	58	71	78	60
50	54	66	73	50
40	49	62	70	40
30	41	55	64	30
20	34	47	51	20
10	22	38	41	10
5	14	30	27	5
Sample N =	116	141	95	Sample N
Sample $\bar{X}$ =	50.02	62.30	66.47	Sample $\bar{X}$
Sample SD =	18.01	16.96	17.86	Sample SD

Appendix 2.D Parent Norms for Language Development Scale.

Raw Scores on Scales

Percentile Equivalent:	3 yrs.	4 yrs.	5 yrs.	Percentile Equivalent:
95	133	137	138	95
90	128	134	137	90
80	115	130	133	80
70	106	127	130	70
60	99	121	126	60
50	92	111	120	50
40	79	102	110	40
30	68	93	103	30
20	57	79	85	20
10	33	57	62	10
5	18	39	26	5
Sample N =	113	139	96	Sample N
Sample $\bar{X}$ =	84.82	103.27	108.56	Sample $\bar{X}$
Sample SD =	33.62	30.94	30.76	Sample SD

Appendix 2.E Parent Norms for Social Development Scale.

Percentile Equivalent:	Raw Scores on Scales 3 yrs.	4 yrs.	5 yrs.	Percentile Equivalent:
95	149	155	155	95
90	142	152	154	90
80	130	148	149	80
70	122	138	144	70
60	118	133	139	60
50	110	129	135	50
40	105	123	126	40
30	94	116	115	30
20	76	106	103	20
10	62	92	90	10
5	50	75	78	5
Sample N =	113	137	94	Sample N
Sample $\bar{X}$ =	105.45	123.80	125.54	Sample $\bar{X}$
Sample SD =	29.19	24.63	27.66	Sample SD